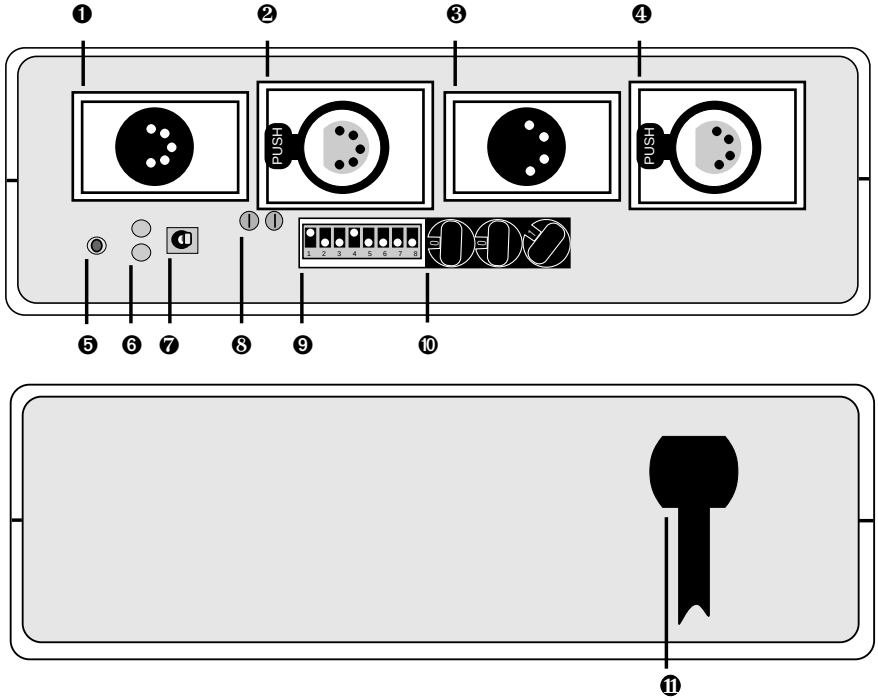
response™ Converter

USER MANUAL

The Response ConverterTM network interface allows you to convert 192 DMX512 signals to AMX192 or 192 AMX192 signals to DMX512. The compact interface box features an optically isolated DMX512 link and a 100 hertz output update rate. This manual provides information on all Response Converter controls, connectors and indicators.

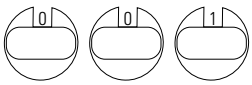


To use Response Converter, follow these steps:

1. Plug power cable into a 120 VAC outlet.
2. For DMX512 to AMX192 operation, set DIP switch 3 down and switch 4 up. If optical isolation is desired, set DIP switch 1 up. For AMX192 to DMX512 operation, set DIP switch 1 down, switch 3 up and switch 4 up.
3. Press Reset.
4. Insert input and output cables into appropriate connectors.
5. Set number switches to starting dimmer output number (see page 2).
6. If Response Converter is the last device in a DMX512 data link, set DMX512 terminator switch **On** (right). In AMX192 to DMX512 mode, leave terminator switch **Off** (left).
7. See following pages for adjustment pot settings and additional information on switch functions and settings.

Note: When data flow is interrupted, all outputs fade to zero percent after three minutes.

Entering starting analog dimmer address



The rotary number switches allow you to set the control signal number for the first output dimmer. The remaining 191 analog outputs are consecutively numbered from that number.

Set the rotary number switches to a starting number between 001 and 512 for DMX512 to AMX192 operation. For AMX192 to DMX512 operation, enter a starting number between 001 and 192. The Response Converter reads numbers over the output quantity limit as a starting address of 1. You do not have to press Reset when resetting the starting address, unless you are also ending a diagnostic test.

Performing diagnostic tests

Six diagnostic tests are provided on the Response Converter. The first two digits entered on the number switches specify the type of test; the third digit determines the rate at which it runs. To run a test, follow these steps:

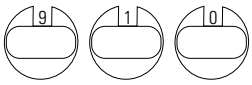
1. Enter the two-digit test number on the left and center rotary number switches. See below for test numbers and descriptions.

2. Enter a rate number on the right number switch.

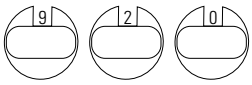
   For each test, the third digit determines the rate at which the test runs. When the third digit is set at 0, the test pauses; when the third digit is set at 1, test runs at its minimum rate; at 9 it runs at its maximum rate.

3. Press Reset to start test.

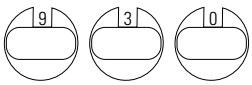
4. To stop test, enter a three-digit starting dimmer number from 001to 192 on the number switches, and press Reset.



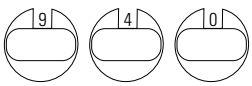
Chase
The **Chase** test flashes each of the 192 dimmers to full intensity in a chase sequence. Set first two number switches to 91.



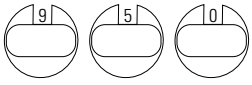
Fade All
The **Fade All** test simultaneously fades all dimmers to full intensity, and then back down to zero intensity. Set first two number switches to 92.



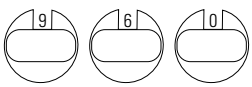
Fade Chase
The **Fade Chase** test fades each of the 192 dimmers to full intensity, and then back to zero intensity in a chase sequence. Set first two number switches to 93.



Selected Output to Full
The **Selected Output to Full** test sets a selected dimmer output to full intensity and holds it there. Set first two number switches to 94, and press Reset. Then enter dimmer number from 001 to 192.



All to Percent
The **All to Percent** test sets all dimmer outputs to an intensity percentage you specify and holds them there. Set first two numbers to 95, and press Reset. Then enter any three-digit percentage between 000 and 100 on the number switches.



All to DMX512 Level
The **All to DMX512 Level** test sets all dimmer outputs to an intensity level you set and holds them there. DMX512 level changes the output scale from 0-100 (percent output intensity) to 0-255 (DMX512 data format). Set the first two numbers to 96, and press Reset. Then enter a DMX512 intensity level between 000 and 255 on the number switches.

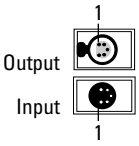
DMX512 pinout

1 - Common
2 - Data (-)
3 - Data (+)
4 - No connection
5 - No connection

AMX192 pinout

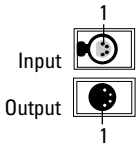
1 - Common
2 - Clock (+)
3 - Analog levels
4 - Clock (-)

DMX512 connectors



Response Converter has two 5-pin XLR connectors, a male connector for DMX512 input and a female connector for DMX512 output.

AMX192 connectors



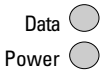
Response Converter has two 4-pin XLR connectors, a female connector for AMX192 input and a male connector for AMX192 output.

Reset switch

Pressing the Reset switch forces the microprocessor to reread DIP switch and number switch settings.

You must press Reset to activate DIP switch setting changes and to start and stop diagnostic tests. You do not have to press Reset when you change the starting dimmer number (unless you are also ending a diagnostic test).

Indicator LEDs

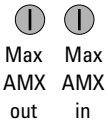


Top LED continuous	Receiving valid data
Top LED blinking	Receiving invalid or no data
Bottom LED continuous	Receiving power

DMX512 termination switch

Set the termination switch **On** (right) if the Response Converter is the last device in a DMX512 data stream. If you are sending a DMX512 data stream to another interface or dimming device, set the termination switch **Off** (left). For AMX192 to DMX512 operation, set terminator switch **Off** (left).

Potentiometers



The Response Converter has two potentiometers, one adjusts maximum AMX192 input levels, and one adjusts maximum AMX192 output levels.

AMX192 maximum output level
The left pot adjusts the maximum AMX192 output level. Turn pot clockwise to increase maximum output level, or counterclockwise to decrease it. When shipped from the factory, maximum AMX192 output level is set at 5 volts.

AMX192 maximum input level
The right pot adjusts the maximum AMX192 input level. Turn pot clockwise to increase maximum input level, or counterclockwise to decrease it. When shipped from the factory, maximum AMX192 input level is set at 5 volts.

DIP switch settings

DIP switch settings determine DMX512 or AMX192 operation mode and enable and disable optical isolation. See below for DIP switch settings; set all unused DIP switches in the down position.

Operation mode
Set DIP switches 3 and 4 according to chart below to select DMX512 or AMX192 operation.

	Switch 3	Switch 4
DMX512 to AMX192 operation	Down	Up
AMX192 to DMX512 operation	Up	Up

Enable/disable optical isolation
Optical isolation creates a physical break between the Response Converter and a DMX512 link to help prevent accidental high voltage potentials from damaging other equipment on the DMX512 link. Optical isolation must be disabled for AMX192 to DMX512 operation. See chart for DIP switch settings to enable and disable optical isolation.

	Switch 1
Optical isolation enabled (DMX512 to AMX192)	Up
Optical isolation disabled (AMX192 to DMX512)	Down

AC power

The Response Converter has an operating range of 90 to 140 volts with optimal performance at 110 volts. It has an internal type GMA-1/2 fuse. Disconnect power before replacing fuse.

Specifications

Dimensions	2.25"H x 6"W x 7"D
Weight	3 pounds
Processing speed	100 hertz

Electronic Theatre Controls, Inc.
3030 Laura Lane
Middleton, WI 53562
608/831-4116 FAX 608/836-1736
Copyright 1991-95 Electronic Theatre Controls, Inc.
Specifications subject to change. Revised 2-91.